

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 September 2005 (22.09.2005)

PCT

(10) International Publication Number
WO 2005/088122 A1

(51) International Patent Classification⁷:
F02C 6/14, 7/10, F03D 9/00

(21) International Application Number:
PCT/CH2005/000142

(22) International Filing Date: 10 March 2005 (10.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
04405156.3 16 March 2004 (16.03.2004) EP

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

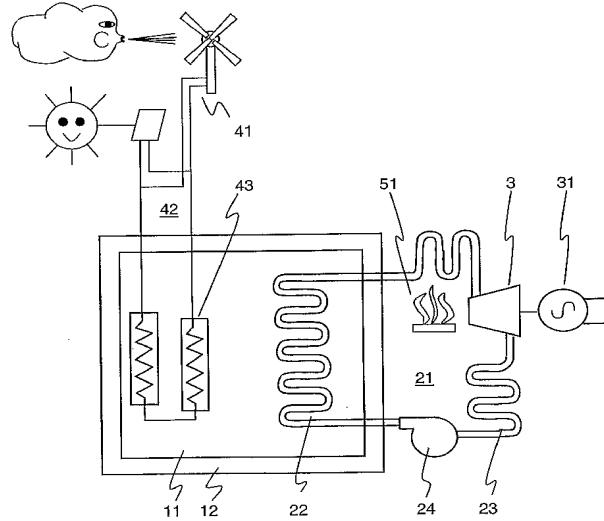
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: APPARATUS AND METHOD FOR STORING THERMAL ENERGY AND GENERATING ELECTRICITY



(57) **Abstract:** Because the efficiency of the thermal energy storage technology is inherently restricted, its beneficial use is limited to very particular economic boundary conditions, i.e. a large difference between the value of electricity going *into* the unit and the value of electricity coming *out* of the unit. With the reduction in wind power equipment prices and the cost of fossil fuels and/or their combustion products this is occasionally the case for wind power. Wind is a free fuel and the value of wind power when there is too little load demand is essentially zero, and the value of wind power when there is demand is considerable indeed. Under these circumstances, a combination of electrothermal energy storage and combustion of (fossil) fuels as an auxiliary heat source provides for a cost efficient system for storing energy and an economical way of generating electricity.

WO 2005/088122 A1